

# Marine Corps Field Casualty Monitoring/Tracking Support

*L T Kenneth Sausen, MSC USNR*

*Naval Aerospace Medical Research Laboratory, 51 Hovey Road, Pensacola, FL 32508-1046*

*(850) 452-8097*

*ksausen@namrl.navy.mil*

The concepts of U.S. Marine Corps warfighting have been radically altered to reflect today's geopolitical realities as described in white papers, such as Operational Maneuver From the Sea. These doctrinal changes envision expeditionary operations that primarily respond to regional conflicts. The incidence of combat casualties inflicted on friendly forces and noncombatants in such operations could be high because these actions may be dominated by close-in combat and highly lethal weapons systems. The care and movement of casualties will be complicated by the fact that combat operations are expected to involve simultaneous, geographically separated actions.

The current system for medical regulation and evacuation coordination is prone to errors and is poorly suited to the expected battlefield. Degradation of the medical regulating system in battle has and will yield casualties "lost to the system." Furthermore, the existing system is inherently inefficient, wasting valuable time and resources that could otherwise be used to save life and limb. Paradigmatic shifts in warfighting therefore require us to consider new concepts in medical regulating, particularly at echelons 1 and 2. A flexible, user-friendly information-management system for real-time correlation of tactical

operations, patients, and echelons 1 through 4 evacuation and treatment resources would significantly improve medical regulation future battlefields. The necessary technology is currently available.

This research and development effort will assess available technology and produce a Tactical Medical Coordination System (TacMedCS). TacMedCS is a candidate system for efficient casualty tracking from point of injury through transport and definitive care. System components will include an individual computer chip containing patient information (Tier-1). A hand-held unit (Tier-2) will have the ability to interrogate and update Tier-1 components. The system will store identification, diagnostic, treatment, and location information on board for later download. Finally, the system will be able to transmit the data to medical regulating control centers, or appropriate operational coordination sites, and to a tactical-medical information display system (Tier-3).

The research effort will include initial component assembly, parity tests, and initial operating procedures development (Year 1), functional tests under existing training and development scenarios with operating procedure refinement (Year 2), and operational tests in a deployed situation (Year 3).